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Soybean rust weekly outlook: May 8, 2005

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Last week we stated that knowing whether soybean rust occurs in Alabama, Mississippi, and/or Louisiana in May is critical to better determine the risk of epidemics of this disease in the northern soybean production region. We intend to provide weekly outlooks of this disease from the analysis of updated information of disease occurrence in the southern states and computer modeling results.

Status of soybean rust

The disease was confirmed in Seminole County in southwestern Georgia last week but in a very limited area. Because soybean rust is found no farther north than southern Georgia suggests that dispersal of this disease is slower than many scientists had anticipated, although computer models have projected movement of spores to Georgia, South Carolina, Alabama, and part of Louisiana at very low densities.

Recent tests by scientists with the United States Department of Agriculture showed that many kudzu seed samples collected from southern states including Louisiana are very susceptible to soybean rust. The tests suggest we should consider taking kudzu in the South into account as an important risk factor in our assessments.

Potential pathways from Georgia

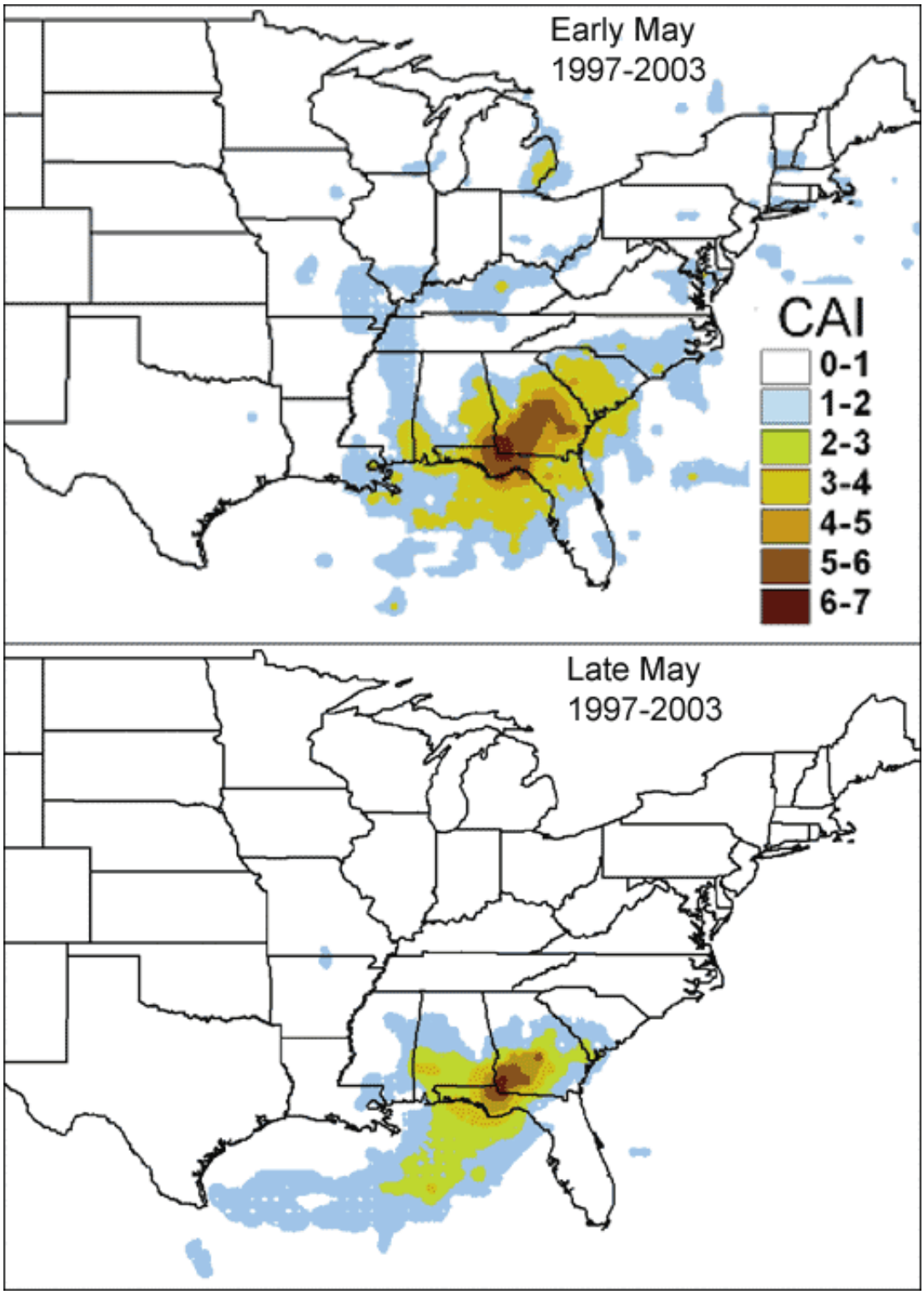
We analyzed the potential pathways from Seminole County, Georgia (where soybean rust was found a week ago), with historical weather data for the period of 1997 to 2003 with the assumption that the rest of the month is favorable for spore production. Results suggest that from that area the spores are likely limited to southeastern states for the month of May, even with an assumption of having large spore production. However, computer models suggest that spores originally produced in Florida may have already arrived in other Gulf Coast states, which could lead to rust being found in those areas.

Outlook

The risk of having epidemics in the northern soybean production region this season is still largely unknown. We have nearly passed the window for a worst-case scenario here. In that worst-case scenario, outbreaks would occur on kudzu in Louisiana, Mississippi, or Alabama before June from disease that established there by early May. With such outbreaks, the disease is likely to establish in parts of northern soybean production regions before July. Since the disease has not been found in those three states yet, it suggests to us that the

likelihood of having a worse-case scenario epidemic is increasingly unlikely.

We should have better outlooks as the season progresses for July and August, two critical months for soybean growth in northern soybean production.



Potential deposition areas of soybean rust spores from Seminole County, Georgia, if a large amount of spores are produced there. Upper map is for the first half of May and the lower map is for the second half of May. The CAI represents a qualitative index (0-7) for possibility of spore deposition.

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